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Room 2A-207
Bedminstor, NJ 07921

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BELANI, KISHIN G	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/636,005	WRIGHT ET AL.	
	Examiner	Art Unit	
	KISHIN G. BELANI	2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/27/2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5,7-12 and 14-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5, 7-12 and 14-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to Applicant's RCE filed on 01/27/2009. **Claims 2-4, 7, 8, 11, 12, 14-18, 20 and 21 have been amended. Claims 1, 6 and 13 have been cancelled. New claims 22-28 have been added.** However, as per applicants' arguments/remarks in the amendment, **only claims 2-5, 7-12 and 14-25 are pending** in the present application. Since without new independent claim 26, the dependent claims 14-21 cannot be considered, the examiner has included claim 26 for consideration in this office action. However, the examiner will not consider newly added claims 27-28 as per the applicants' instructions. The applicant's amendments to claims are shown in ***bold and italics***, and the examiner's response to the amendments is shown in **bold** in this office action.

The examiner would like to place on record the fact that the same applicants had filed a co-pending application 10/636,432 with similar disclosure and claims on the same date (08/07/2003), that they failed to mention in the first paragraph of the instant application as required. The co-pending application has been issued as a patent 7,315,538 B2 on 01/01/2008.

The examiner would also like to place on record the fact that the applicants have provided not a single IDS even after their co-pending application has been issued as a patent. The applicants must provide all related prior art known to them as soon as possible.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/27/2009 has been entered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-5, 7-12, and 14-26 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent Publication # 7,315,538 B2 by Wright et al. filed 08/07/2003 and issued 01/01/2008, as shown in the correspondence table below:

Instant Application # 10/636,005 by Wright et al., filed 08/07/2003	U.S. Patent Publication # 7,315,538 B2 by Wright et al., filed 08/07/2003
Method claim 2: Upload speed from the first point of service faster than the download speed	Method claim 1: Communicate at a faster upload bandwidth than a download bandwidth at the first point of service
Method claim 3: Upload speed from the first point of service slower than the download speed	Method claim 1: Communicate at a faster download bandwidth than an upload bandwidth at

	the first point of service
Method claim 4: First ADSL modem providing an Ethernet port for connection to the Ethernet network; second ADSL modem providing a second Ethernet port for the first point of service; first and second ADSL modems communicate with each other.	Method claim 1: First ADSL modem at the first point of service (First modem in this corresponds to second modem in instant application); Second ADSL modem at the first point of service (second modem in this case corresponds to fourth modem [see claim 5] in instant application)
Method claim 5: Third ADSL modem providing a third port for connection to the Ethernet network; fourth ADSL modem providing a fourth Ethernet port for the first point of service; third and first ADSL Ethernet ports are aggregated, and fourth and second Ethernet ports are aggregated. See Fig. 2.	Method claim 1: Third ADSL modem at a second service point (Ethernet network) in data communication with the first ADSL modem (third modem in this corresponds to first modem [see claim 4] in instant application) Fourth ADSL modem at a second service point (Ethernet network) in data communication with the second ADSL modem (Fourth modem in this case corresponds to third modem in instant application); third and fourth ADSL modems and first and second ADSL

	modems are aggregated together. See Fig. 2.
System claim 7: A first ADSL modem provides an Ethernet port that connects to the Ethernet network's port; A second ADSL modem at the first point of service communicates with the first ADSL modem	System claims 14 and 12: An Ethernet capable device having an Ethernet port connected to an Ethernet switch; The third ADSL modem in data communication with the first ADSL modem
System claim 8: A third ADSL modem aggregated with the first ADSL modem; and A fourth ADSL modem in communication with the third ADSL modem, and aggregated with the second ADSL modem	System claim 12: A second aggregator to aggregate the third and fourth ADSL modem at the second point of service (third and fourth ADSL modems in this case correspond to the first and third ADSL modems in the instant application); A first aggregator to aggregate the first and second ADSL modem at the first point of service (first and second ADSL modems in this case correspond to the second and fourth ADSL modems in the instant application)

System claim 9: A first Ethernet switch aggregates the first and the third ADSL modems; and A second Ethernet switch aggregates the second and the fourth ADSL modems.	System claim 12, 13 and 19: A second aggregator to aggregate the third and fourth ADSL modem at the second point of service (third and fourth ADSL modems in this case correspond to the first and third ADSL modems in the instant application); A first aggregator to aggregate the first and second ADSL modem at the first point of service (first and second ADSL modems in this case correspond to the second and fourth ADSL modems in the instant application)
System claim 10: The first and second Ethernet switches perform rate shaping and load balancing	System claim 16-17: The Ethernet switch performs rate shaping and load balancing
System claim 11: Upload speed from the first point of service to the Ethernet network is faster than a download speed from the Ethernet network to the first point of service.	System claim 12: A second ADSL modem communicates at a faster upload bandwidth than a download bandwidth at the first service point.
System claim 12:	System claim 12:

Upload speed from the first point of service to the Ethernet network is slower than a download speed from the Ethernet network to the first point of service.	A first ADSL modem communicates at a faster download bandwidth than an upload bandwidth at the first service point.
System claim 14: A router positioned between the first point of service and a computer.	System claim 18: The first aggregator device comprises a router for connection to a network device.
System claim 15: An ADSL modem providing an Ethernet port of the Ethernet network.	System claim 14: The system further comprises one or more computers having an Ethernet port connected to the Ethernet switch.
System claim 16: The Ethernet network further comprises a second ADSL modem in communication with the (first) ADSL modem.	System claim 12: The third ADSL modem in data communication with the first ADSL modem (correspond to the first and second ADSL modems in instant application).
System claim 17: The Ethernet network further comprises a third ADSL modem in communication with the fourth ADSL modem; and Wherein the third ADSL modem is aggregated with the first and the fourth	System claim 12: See claims 7-9 of the instant application in this table.

ADSL modem is aggregated with the second ADSL modem.	
System claim 18: A first Ethernet switch aggregating the (first) ADSL modem with the third ADSL modem, and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem.	System claims 13 and 19: See claim 9 of the instant application in this table.
System claim 19: The first and the second Ethernet switches perform rate shaping and load balancing.	System claim 16 and 17: The Ethernet switch performs rate shaping and load balancing.
System claim 20: Upload speed from the first point of service is faster than a download speed.	System claim 12: See claim 11 of the instant application in this table.
System claim 21: Upload speed from the first point of service is slower than a download speed.	System claim 12: See claim 12 of the instant application in this table.
Method claim 22: See claim text.	Method claim 1: See claim text.
Method claim 23: Aggregating the plurality of ADSL Ethernet connections increases a bandwidth	Method claim 1: See explanation in the left column for claim 5 of the instant application in this

between the first point of service and the Ethernet network.	table.
System claim 24: See claim text.	System claim 12: See claim text.
System claim 25: Aggregated asymmetric Ethernet connections increase a bandwidth between the first point of service and the Ethernet network.	System claim 12: See explanation in the left column for claim 5 of the instant application in this table.
System claim 26: See claim text.	System claim 12: See claim text.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 discloses an aggregator device that aggregates the first asymmetric Ethernet connection (between the first point of service and the Ethernet port of the Ethernet network) and the second asymmetric Ethernet connection (between the

second point of service and the Ethernet port of the Ethernet network). The claim further recites communicating a subscriber data between the first point of service and the Ethernet port of the Ethernet network via the first and second asymmetric Ethernet connections, wherein both the first point of service and the second point of service are located remotely from the Ethernet network. It is not clear how a subscriber data meant for the first point of service be carried by the second asymmetric Ethernet connection that leads to the second point of service located remotely from the Ethernet network.

Dependent claims 14-21 and 27 are also rejected based on their dependence on the rejected independent claim 26.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by **White et al. (U.S. Patent Application Publication # 2007/0110041 A1).**

Consider **claim 22.** White et al. show and disclose a method of providing asymmetric Ethernet service (Fig. 1 that shows a method of providing Ethernet-based DSL service at customer's premises 40, 46, 52 and 54; paragraphs 0017, 0018 and 0024 disclose the details of the method, including providing ADSL (asymmetric

Ethernet) service); the method comprising:

providing an Ethernet network remote from a first point of service and in communication with the first point of service (Fig. 1 that shows an Ethernet network at the central office 102, remote from a first point of service at any of the customer premises 40, 46, 52 and 54, and in communication with the first point of service via remote Ethernet devices 24-26; paragraphs 0025-0027 describe the same details);

establishing an asymmetric Ethernet communication between the Ethernet network and the first point of service to allow access to the Ethernet network by a subscriber (paragraphs 0024 that discloses providing ADSL service between the Ethernet network at 102 and the first point of service at 40, 46, 52 or 54, to allow access to the Ethernet network by a subscriber),

wherein establishing the asymmetric Ethernet communication comprises aggregating a plurality of asymmetric Ethernet connections between the Ethernet network and a plurality of points of service including the first point of service (Fig. 1 that shows aggregation of a plurality of asymmetric Ethernet connections between the Ethernet network and a plurality of points of service (e.g. at 40, 46, 52 or 54) including the first point of service (e.g. at 40), aggregation happening at the remote Ethernet devices 24 and 26, as well as the Ethernet Switch 100; paragraph 0025 which discloses that the remote Ethernet device 24 communicates with the Ethernet-based DSL modems 80 and 82 over the first Ethernet standard, and paragraph 0027 which discloses that a plurality of remote Ethernet devices, including devices 24 and 26 communicate with the Ethernet switch 100 located in the central office); and

communicating a subscriber data communication between the first point of service and the Ethernet network via two or more of the aggregated asymmetric Ethernet connections (Fig. 1 which further shows that data from a subscriber is communicated from the first point of service at 40 and the Ethernet network at 102 via two or more of the aggregated asymmetric Ethernet connections; paragraphs 0025 and 0027 disclose the same details).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **White et al. (U.S. Patent Application Publication # 2007/0110041 A1)** in view of **Redfern** (**U.S. Patent Application Publication 2003/0198217 A1).**

Consider **claim 2**, **and as applied to claim 22 above,** White et al. show and disclose the claimed method except wherein an upload speed from the ***first*** point of service to the Ethernet network through the asymmetric Ethernet communication is faster than a download speed from the Ethernet network through the asymmetric Ethernet communication to the ***first*** point of service.

In the same field of endeavor, Redfern describes users that require upload speed from the point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the subscriber point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose an apparatus and a method for providing extended upstream data transmission an additional

frequency band between f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide the upload speed from the first point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the first point of service, as taught by Redfern in the method of White et al., so that the needs of the users who are required to transmit large amount of data from the first point of service to the Ethernet network can also be met.

Claims 3-5, 24, 7, 8, 12, 26, 14-17, 21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White et al. (U.S. Patent Application Publication # 2007/0110041 A1)** in view of **Saussy (U.S. Patent Publication # 5,936,963).**

Consider **claim 3**, **and as applied to claim 22 above**, White et al., as modified by Saussy, further show and disclose the claimed method, wherein an upload speed from the ***first*** point of service to the Ethernet network through the asymmetric Ethernet communication is slower than a download speed from the Ethernet network through the asymmetric Ethernet communication to the first point of service (in Saussy reference, Fig. 1 that shows data rate of 10 Mbps from the Ethernet network to the subscriber's

Ethernet port, but the upload data rate of only 640 Kbps from the subscriber's Ethernet port 32 to the Central Office MUX 40; column 4, lines 1-3 that disclose the same details).

Consider **claim 4**, **and as applied to claim 22 above**, White et al., as modified by Saussy, further show and disclose the claimed method, wherein establishing an asymmetric Ethernet communication between the Ethernet network and the first point of service comprises:

utilizing a first asymmetric DSL modem to provide a first Ethernet port for connection to the Ethernet network (in Saussy reference, column 4, lines 17-23 which disclose that the AEM (marked as MUX in Fig. 1) offers a large number of Asymmetric Link ports with transmit and receive inverted (so that many EACs can connect to the AEM, one of them from the subscriber's premises). AEM also offers one or more Ethernet ports for the enterprise LAN at the central office, operating at either 10 Mbps or at 100 Mbps, as shown in Fig. 1); and

utilizing a second asymmetric DSL modem to provide a second Ethernet port for the first point of service, where the first asymmetric DSL modem is in data communication with the second asymmetric DSL modem to carry the Ethernet communications asymmetrically (in Saussy reference, Fig. 1, EAC block 14 and connection 20; column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem by connection 12).

Consider **claim 5**, **and as applied to claim 4 above**, White et al., as modified by Saussy, show and disclose the claimed method, wherein establishing an Ethernet communication between the Ethernet network and the ***first*** point of service further comprises:

utilizing a third asymmetric DSL modem to provide a third Ethernet port for connection to the Ethernet network, wherein the third Ethernet port of the third asymmetric DSL modem and the first Ethernet port of the first asymmetric DSL modem are aggregated at an aggregator device in communication with the Ethernet network (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed); and

utilizing a fourth asymmetric DSL modem to provide a fourth Ethernet port for the first point of service, wherein the fourth Ethernet port of the fourth asymmetric DSL modem and the second Ethernet port of the second asymmetric DSL modem are aggregated at the aggregator device at the first point of service (in White et al. reference, Fig. 1, modem blocks 80 (representing a second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device)).

Consider **claim 24.** White et al. show and disclose a system for providing asymmetric Ethernet service (Fig. 1 that shows a system of providing Ethernet-based

DSL service at customer's premises 40, 46, 52 and 54; paragraphs 0017, 0018 and 0024 disclose the details of the system, including providing ADSL (asymmetric Ethernet) service), the system comprising:

an Ethernet network (Fig. 1, Ethernet network at central office 102; paragraph 0027 describes the details of the Ethernet network);

a first point of service located remotely from the Ethernet network to allow access to the Ethernet network by a subscriber (Fig. 1 that shows a first point of service at any of the customer premises 40, 46, 52 and 54, located remotely from the Ethernet network at the central office 102, and allowing access to the network by a subscriber via remote Ethernet devices 24-26; paragraphs 0025-0027 describe the same details);

a plurality of aggregated asymmetric Ethernet connections between the Ethernet network and a plurality of points of service including the first point of service (Fig. 1 that shows a plurality of aggregated asymmetric Ethernet connections (between remote Ethernet devices 24-26 and Ethernet switch 100) between the Ethernet network at 102 and a plurality of points of service including the first point of service 40); and

an aggregator to communicate a subscriber data communication between one of the points of service and the Ethernet network via two or more of the aggregated asymmetric Ethernet connections (Fig. 1 that shows aggregation of a plurality of asymmetric Ethernet connections between the Ethernet network and a plurality of points of service (e.g. at 40, 46, 52 or 54) including the first point of service (e.g. at 40), aggregation happening at the remote Ethernet devices 24 and 26, as well as the Ethernet Switch 100; paragraph 0025 which discloses that the remote Ethernet device

24 communicates with the Ethernet-based DSL modems 80 and 82 over the first Ethernet standard, and paragraph 0027 which discloses that a plurality of remote Ethernet devices, including devices 24 and 26 communicate with the Ethernet switch 100 located in the central office; Fig. 1 which further shows that data from a subscriber is communicated from the first point of service at 40 and the Ethernet network at 102 via two or more of the aggregated asymmetric Ethernet connections; paragraphs 0025 and 0027 disclose the same details).

However, White et al. do not explicitly disclose Ethernet port for an Ethernet network.

In the same field of endeavor, Saussy show and disclose the claimed system, with an Ethernet network, including an Ethernet port (Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of an Ethernet network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of an Ethernet network).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide Ethernet port for an Ethernet network, as taught by Saussy, in the system of White et al., so that communication can take place between the first point of service and the Ethernet network on the specified port.

Consider **claim 7**, **and as applied to claim 24 above**, White et al., as modified by Saussy, further show and disclose the claimed system further comprising a first ADSL modem providing an Ethernet port in communication with the Ethernet port of the

Ethernet network (in Saussy reference, column 4, lines 17-23 which disclose that the AEM (marked as MUX in Fig. 1) offers a large number (including one selected to be a first asymmetrical DSL modem) of asymmetric link ports with transmit and receive inverted. AEM also offers one or more Ethernet ports for the enterprise LAN at the central office, operating at either 10 Mbps or at 100 Mbps, as shown in Fig. 1);
and a second ADSL modem at the ***first*** point of service in communication with the first ADSL modem to carry the Ethernet communications asymmetrically (in Saussy reference, Fig. 1, EAC block 14 and connection 20; column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem by connection 12).

Consider **claim 8**, **and as applied to claim 7 above**, White et al., as modified by Saussy, show and disclose the claimed system, wherein the Ethernet network further comprises:
a third ADSL modem aggregated with the first ADSL modern (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed); and
a fourth ADSL modem in communication with the third ADSL modem and being aggregated with the second ADSL modem to carry Ethernet communications asymmetrically (in White et al. reference, Fig. 1, modem blocks 80 (representing a

second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device)).

Consider **claim 12**, **and as applied to claim 24 above,** White et al., as modified by Saussy, further show and disclose the claimed system, wherein an upload speed from the ***first*** point of service to the Ethernet network is slower than a download speed from the Ethernet network to the ***first*** point of service (in Saussy reference, Fig. 1 that shows data rate of 10 Mbps from the Ethernet network to the subscriber's Ethernet port, but the upload data rate of only 640 Kbps from the subscriber's Ethernet port 32 to the Central Office MUX 40; column 4, lines 1-3 that disclose the same details).

Consider **claim 26.** White et al. show and disclose a system for providing asymmetric Ethernet service to a network device of a subscriber (Fig. 1 that shows a system of providing Ethernet-based DSL service at customer's premises 40, 46, 52 and 54; paragraphs 0017, 0018 and 0024 disclose the details of the system, including providing ADSL (asymmetric Ethernet) service), the system comprising:
an Ethernet network (Fig. 1, Ethernet network at central office 102; paragraph 0027 describes the details of the Ethernet network);
a first point of service and a second point of service located remotely from the Ethernet network (Fig. 1 that shows a first (40) and a second (46) point of service at any of the

customer premises 40, 46, 52 and 54, located remotely from the Ethernet network at the central office 102; paragraphs 0025-0027 describe the same details);

a first asymmetric Ethernet connection between the first point of service and the Ethernet network (Fig. 1 that shows a first asymmetric Ethernet connection between the first point of service 40 and Ethernet network at 102; paragraphs 0025-0027 describe the same details);

a second asymmetric Ethernet connection between the second point of service and the Ethernet network (Fig. 1 that shows a second asymmetric Ethernet connection between the second point of service 46 and Ethernet network at 102; paragraphs 0025-0027 describe the same details); and

an aggregator device to aggregate the first and the second asymmetric Ethernet connections (Fig. 1 that shows a remote Ethernet device 24 that aggregates the first (40) and the second (46) asymmetric Ethernet connections; paragraph 0025 which discloses that the remote Ethernet device 24 communicates with the Ethernet-based DSL modems 80 and 82 over the first Ethernet standard).

However, White et al. do not explicitly disclose Ethernet ports for the point of services or Ethernet network.

In the same field of endeavor, Saussy show and disclose the claimed system, with an Ethernet network, including an Ethernet port (Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of an Ethernet network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of an Ethernet network).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide Ethernet port for an Ethernet network, as taught by Saussy, in the system of White et al., so that communication can take place between the first point of service and the Ethernet network on the specified port.

Consider **claim 14**, **and as applied to claim 26 above**, White et al., as modified by Saussy, further disclose the claimed system, wherein the ***first*** Ethernet connection between the ***first*** point of service and the network device of the subscriber includes a router positioned between the ***first*** point of service and a computer (in Saussy reference, Abstract that discloses a premises device is attached to any network node (such as a personal computer, LAN bridge/router, terminal server, etc.) which offers an Ethernet interface; column 3, lines 34-37 that disclose a router between the point of service and a computer).

Consider **claim 15**, **and as applied to claim 26 above**, White et al., as modified by Saussy, disclose the claimed system, further comprising an ADSL modem providing an Ethernet port of the Ethernet network (in Saussy reference, Fig. 1, line marked 10 Base T / 100 Base T that represents a connection to an Ethernet port of the Ethernet network; column 4, lines 20-23 which disclose that the AEM provides connections for one or more Ethernet ports of the Ethernet network).

Consider **claim 16**, and **as applied to claim 15 above**, White et al., as modified by Saussy, disclose the claimed system, wherein the Ethernet network further comprises a second ADSL modem in communication with the first ADSL modem (in Saussy reference, Fig. 1, EAC block 14 (a second ADSL modem); column 5, lines 3-8 that describe EAC as an ADSL modem at the customer's premises connected to one of the AEM's (MUX in Fig. 1) modem (the first ADSL modem) by connection 12).

Consider **claim 17**, **and as applied to claim 16 above**, White et al., as modified by Saussy, disclose the claimed system, wherein the Ethernet network further comprises a third ADSL modem aggregated with the ADSL modem (in Saussy reference, Fig. 1, block 8 marked as NODE (2) (third ADSL modem) and EAC block 14 (first ADSL modem) along with other nodes being aggregated by MUX block 40; column 4, lines 17-23 that disclose the aggregation of multiple ports into one or more Ethernet ports operating at 10 Mbps or 100 Mbps speed); and
further comprises a fourth ADSL modem in communication with the third ADSL modem and being aggregated with the second ADSL modem (in White et al. reference, Fig. 1, modem blocks 80 (representing a second asymmetric DSL modem) and 82 (representing a fourth asymmetric DSL modem) being aggregated by Remote Ethernet Device 24 (representing an aggregator device)).

Consider **claim 21**, **and as applied to claim 26 above**, White et al., as modified by Saussy, disclose the claimed system, wherein an upload speed from the ***first*** point

of service to the service provider network is slower than a download speed from the service provider network to the ***first*** point of service (in Saussy reference, Fig. 1, where the speed from the first point of service to the Ethernet network is marked by the upward arrow showing a data rate of 640 Kbps, and the speed from the Ethernet network to the first point of service is marked by the downward arrow showing a data rate of 10 Mbps; column 4, lines 1-3 that disclose the same details).

Consider **claim 23**, **and as applied to claim 22 above**, White et al., as modified by Saussy, disclose the claimed method, wherein aggregating the plurality of asymmetric Ethernet connections increases a bandwidth between the first point of service and the Ethernet network (in Saussy reference, Fig. 1, where the bandwidth from the first point of service to the Ethernet network increases from 10 Mbps download and 640 Kbps upload at the first point of service to 100 Mbps after aggregation through MUX 40; column 4, lines 1-25 disclose the same details).

Consider **claim 25**, **and as applied to claim 24 above**, White et al., as modified by Saussy, disclose the claimed system, wherein the aggregated asymmetric Ethernet connections increase a bandwidth between the first point of service and the Ethernet network (in Saussy reference, Fig. 1, where the bandwidth from the first point of service to the Ethernet network increases from 10 Mbps download and 640 Kbps upload at the first point of service to 100 Mbps after aggregation through MUX 40; column 4, lines 1-25 disclose the same details).

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White et al. (U.S. Patent Application Publication # 2007/0110041 A1)** in view of **Saussy** (**U.S. Patent Publication # 5,936,963)** and further in view of **Deng** (**U.S. Patent Publication 6,243,394 B1).**

Consider **claim 9**, **and as applied to claim 8 above,** White et al., as modified by Saussy, show and disclose the claimed system, except further comprising a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem.

In the same field of endeavor, Deng discloses the claimed system, further comprising a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem (Fig. 1, ADSL Access Device block 14 (first Ethernet switch) aggregating connection 22 (for the first ADSL modem) with connection 24 (for the third ADSL modem) and ADSL Access Device block 40 (second Ethernet switch) aggregating unmarked workstation to the left (via the second ADSL modem) with LAN block 50 (via the fourth ADSL modem)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating

the second ADSL modem with the fourth ADSL modem, as taught by Deng in the system of White et al., as modified by Saussy, so that data from more than one subscriber ports can be aggregated and sent over a single connection as a cost effective data transmission method.

Consider **claim 18**, **and as applied to claim 17 above,** White et al., as modified by Saussy, show and disclose the claimed system, wherein the Ethernet network further comprises a first Ethernet switch aggregating the ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem.

In the same field of endeavor, Deng discloses a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem (Fig. 1, ADSL Access Device block 14 (first Ethernet switch) aggregating connection 22 (for the first ADSL modem) with connection 24 (for the third ADSL modem) and ADSL Access Device block 40 (second Ethernet switch) aggregating unmarked workstation to the left (via the second ADSL modem) with LAN block 50 (via the fourth ADSL modem)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide a first Ethernet switch aggregating the first ADSL modem with the third ADSL modem and a second Ethernet switch aggregating the second ADSL modem with the fourth ADSL modem, as taught by Deng in the system of White et al., as modified by Saussy, so that data from more than one

subscriber ports can be aggregated and sent over a single connection as a cost effective data transmission method.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White et al. (U.S. Patent Application Publication # 2007/0110041 A1)** in view of **Saussy** (**U.S. Patent Publication # 5,936,963)** and further in view of **Deng** (**U.S. Patent Publication 6,243,394 B1)** and further in view of **Olshansky et al.** (**U.S. Patent Publication 6,061,357).**

Consider **claim 10**, **and as applied to claim 9 above,** White et al., as modified by Saussy and Deng show and disclose the claimed system, except wherein the first and second Ethernet switches perform rate shaping and load balancing when transferring data.

In the same field of endeavor, Olshansky et al., disclose the claimed system, wherein the first and second Ethernet switches perform rate shaping and load balancing when transferring data (Fig. 3, Ethernet to ADSL adapter block 110, wherein Controller 130 balances load by issuing jamming commands and Pause/Resume commands during data flow through AE Buffer 122 and EA buffer 120; Figs. 4-7 and column 4, lines 22-67; column 5, lines 1-67; column 6, lines 1-48 that respectively describe load balancing and rate shaping during receive operation at Ethernet network port (Fig. 4), during transmit operation to ADSL modem (Fig. 5), during receive operation from ADSL modem (Fig. 6), and during transmit operation from Ethernet network port (Fig. 7)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide the first and second Ethernet switches that perform rate shaping and load balancing when transferring data, as taught by Olshansky et al. in the system of White et al., as modified by Saussy and Deng, so that asymmetrical upload and download data rates of ADSL data transmission can be managed without data being overwritten in the buffers that temporarily hold data packets.

Consider **claim 19**, **and as applied to claim 18 above,** White et al., as modified by Saussy and Deng, show and disclose the claimed system except wherein the first and second Ethernet switches perform rate shaping and load balancing when transferring data.

In the same field of endeavor, Olshansky et al. disclose the claimed system wherein the first and second Ethernet switches perform rate shaping and load balancing when transferring data (Fig. 3, Ethernet to ADSL adapter block 110, wherein Controller 130 balances load by issuing jamming commands and Pause/Resume commands during data flow through AE Buffer 122 and EA buffer 120; Figs. 4-7 and column 4, lines 22-67; column 5, lines 1-67; column 6, lines 1-48 that respectively describe load balancing and rate shaping during receive operation at Ethernet network port (Fig. 4), during transmit operation to ADSL modem (Fig. 5), during receive operation from ADSL modem (Fig. 6), and during transmit operation from Ethernet network port (Fig. 7)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to also provide the first and second Ethernet switches that perform rate shaping and load balancing when transferring data, as taught by Olshansky et al., in the system of White et al., as modified by Saussy and Deng, so that asymmetrical upload and download data rates of ADSL data transmission can be managed without data being overwritten in the buffers that temporarily hold data packets.

Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **White et al. (U.S. Patent Application Publication # 2007/0110041 A1)** in view of **Saussy (U.S. Patent Publication # 5,936,963)** and further in view of **Redfern (U.S. Patent Application Publication 2003/0198217 A1).**

Consider **claim 11**, **and as applied to claim 24 above,** White et al., as modified by Saussy, show and disclose the claimed system, except wherein an upload speed from the ***first*** point of service to the Ethernet network is faster than a download speed from the Ethernet network to the ***first*** point of service.

In the same field of endeavor, Redfern describes the claimed system, wherein an upload speed from the ***first*** point of service to the Ethernet network is faster than a download speed from the Ethernet network to the ***first*** point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose a system for providing extended upstream data transmission an additional frequency band between

f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide the upload speed from the first point of service to the Ethernet network faster than the download speed from the Ethernet network to the first point of service, as taught by Redfern in the system of White et al., as modified by Saussy, so that the needs of the users who are required to transmit large amount of data from subscriber to the Ethernet network can be met.

Consider **claim 20**, **and as applied to claim 14 above,** White et al., as modified by Saussy, disclose the claimed system, except wherein an upload speed from the ***first*** point of service to the service provider network is faster than a download speed from the service provider network to the ***first*** point of service.

In the same field of endeavor, Redfern describes users that require upload speed from the first point of service to the Ethernet network through the asymmetric Ethernet communication faster than the download speed from the Ethernet network through the asymmetric Ethernet communication to the first point of service (paragraphs 0006, lines 1-7; paragraph 0009; Fig. 4 and paragraph 0010, that disclose a system for providing extended upstream data transmission an additional frequency band between f1 and f2 originally reserved for download communication from central office to the subscriber) and lowering the power spectral density in that frequency band to minimize cross-talk).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to provide an upload speed from the first point of service to the Ethernet network faster than a download speed from the Ethernet network to the first point of service, as taught by Redfern in the system of White et al., as modified by Saussy, so that the needs of the users who are required to transmit large amount of data from subscriber to the Ethernet network can also be met.

Response to Arguments

Applicants' arguments with respect to **claims 1-21** have been considered but are moot in view of the new ground(s) of rejection. Claims 22-26 are new claims that require no response.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Friday from 6:00 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tonia Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-0800.

/K. G. B./
Examiner, Art Unit 2443

April 7, 2009

/George C Neurauter, Jr./
Primary Examiner, Art Unit 2443